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Artificial reinforced timber articles

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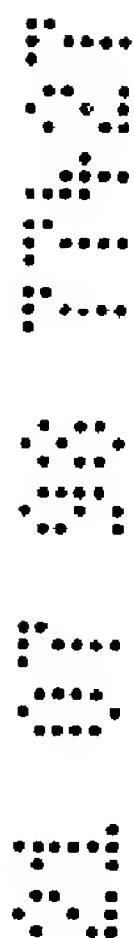
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(56) Related Art
DE 19537740
GB 2330855
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ABSTRACT

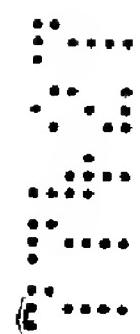
A timber article of particle board or custom wood including a reinforcing strip of solid timber at least along an edge portion or portions of the timber article into which fixing means such as screws, nails or the like may be affixed. Artificial timbers such as custom wood or particle board lend themselves to moulding techniques for use as a dressed timber substitute such as for door and window frames, architraves, cupboards and cabinets. The present invention seeks to overcome a major disadvantage with such timbers in providing an adequate fixing system that avoids premature breakage.



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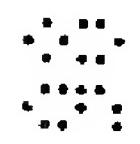
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**ORIGINAL
COMPLETE SPECIFICATION
STANDARD PATENT**

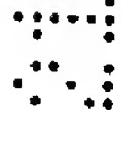
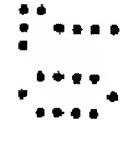


Application Number:

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Invention Title: ARTIFICIAL REINFORCED TIMBER ARTICLES



The following statement is a full description of this invention, including the best method of performing it known to us :-

ARTIFICIAL REINFORCED TIMBER ARTICLES

BACKGROUND OF INVENTION

The present invention relates to artificial timbers particularly so called
5 particle board or medium density fibre board. The invention even more
specifically is directed to dressed artificial timbers.

DESCRIPTION OF PRIOR ART

A problem with artificial timbers is that they are relatively weak particularly
when one endeavours to fix other components or parts to the artificial timbers as
10 occurs with door frames, cupboard doors, window frames and similar areas
where artificial timber is utilised.

Laminated plywood timber is well known in panelling work. The central
core of plywood is usually of solid timber and provides strength whilst still
retaining some flexibility. Plywoods, otherwise known as "3 Ply" are well known
15 and do not merit further discussion here.

Other laminated timbers include floor boards or parquetry flooring and an
example is disclosed in US Patent Number US 3,888,061 disclosing oblong
panels of wood boards including an interengaging, strengthening solid timber
edge fillet in grooves for interconnecting said boards in a tongue and groove
20 fashion. A somewhat similar arrangement is disclosed in German Specification
Number 3309645 showing a composite wooden panel with solid timber inserts
to secure the panels together for forming decorative walls and ceilings and the
like.

The disclosure in US Patent Number 4,122,236 discloses a board of
25 artificial timber in which aligned hardwood splinters are compressed together
with adhesive to form an elongated board forming an artificial timber of
comparable strength to natural timbers.

Such prior art arrangements do not address the problem set out to be
overcome by the present invention, namely of utilizing artificial timbers as a
30 replacement for dressed natural timbers having adequate strength and fixing
characteristics.

SUMMARY OF THE INVENTION

The objective of the invention is to address at least one of the problems of the prior art.

In accordance with a first aspect of the invention, an artificial timber article
 5 having one or more reinforcing portions, the one or more reinforcing portions are made of solid timber and positioned so as to be capable of receiving one or more fixing means.

In accordance with a second aspect of the invention, a timber article of particle board or medium density fibre board including a reinforcing strip of solid
 10 timber at least along an edge portion or portions of the timber article into which fixing means such as screws, nails or the like may be affixed.

In accordance with a third aspect of the invention, a method of strengthening or modifying an artificial timber article for application of fixing means, the method including the steps of:

15 forming a groove in the artificial timber article at least partially along one or more sides thereof; and fitting a strip of reinforcing material into the groove or grooves, wherein the reinforcing material inserted is solid timber.

According to an embodiment the dimension of the strip and the location
 20 thereof is such that the fixing means may penetrate said reinforcing strip to achieve a fixing strength substantially equivalent to fixing to an article wholly made of solid timber.

The strengthened artificial timber article according to the present invention may be dressed and may be used in applications normally confined to dressed
 25 timber articles, thereby providing a cheaper alternative while maintaining a substantially equivalent fixing strength.

Examples of solid timbers that the present invention may be used to replace are kiln dried hardwoods and softwoods which are relatively expensive materials.

30 The present invention is to provide a strengthened artificial timber article and method of producing such an article, wherein the article is suitable for use as replacement for solid timber components such as door frames, window frames,



cupboards, furniture and architraves. It has been found that fixing screws and the like to artificial timbers is inadequate as the timber tends to disintegrate around the fixing screws. This is avoided by the present invention.

The invention is based on strengthening custom or artificial timber. In one form, this is accomplished by integrating or inserting solid timber.

DETAILED DESCRIPTION OF THE INVENTION

With reference to figure 1, there is illustrated an example of an artificial timber article according to the invention in which a piece of artificial timber, such as particle board or medium density fibre board (e.g. custom wood) 10 is grooved along two edges and strips of solid timber 11a and 11b, preferably of hardwood, are inserted snugly into the grooves. The solid timber may be affixed in the grooves with wood adhesive. Other timbers providing reinforcing may be used in the present invention.

By inserting solid timber along the edges of the artificial timber the artificial timber has increased strength and is capable of receive fixing means with reduced risk of splintering or breakage.

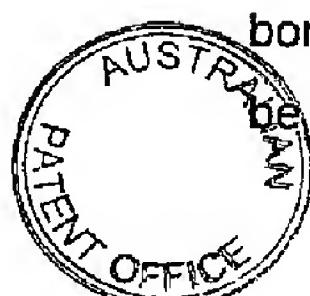
By placing the solid timber inserts along two opposite edges the timber article may be used in either orientation. It is noted, however, that the inserts may be placed along the edges only as needed, so it is possible that a piece of artificial timber may only have one insert along one edge or even only along a portion of that edge.

Once formed, the resulting timber article 1 may be sawn or worked in the usual manner.

In the example shown the timber article 1 has a hinge 12 fitted to an elongate edge of the timber article by screws, so that the article may be used as a door frame, window frame or the like.

It will be appreciated that the solid timber insert may be of any shape or dimension. The only requirement is to ensure that the fixing means, in this embodiment being screws, are embedded and affixed into the insert.

In another embodiment of the invention (not illustrated), holes may be bored down one or more sides of the artificial timber article for the solid timber to be inserted into. Through this embodiment of the invention, it is apparent that as



long as the solid timber is inserted into the region in which fixing means are to be affixed, then the solid timber inserts may be applied in any manner.

Artificial timbers such as medium density fibre board or particle board lend themselves to moulding techniques for use as a dressed timber substitute

- 5 such as for door and window frames, architraves, cupboards and cabinets. The present invention seeks to overcome a major disadvantage with such timbers in providing an adequate fixing system that avoids premature breakage. The artificial timber article according to the present invention is a viable price competitive alternative to solid dressed timbers traditionally used in these
- 10 situations.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An artificial timber article having one or more reinforcing portions, the one or more reinforcing portions are made of solid timber and positioned so as to be capable of receiving one or more fixing means.
2. An artificial timber article according to claim 1, wherein the reinforcing portion is fitted into a groove along at least a part of an edge of the article.
3. A timber article of particle board or medium density fibre board including a reinforcing strip of solid timber at least along an edge portion or portions of the timber article into which fixing means such as screws, nails or the like may be affixed.
4. A method of strengthening or modifying an artificial timber article for application of fixing means, the method including the steps of:
 - forming a groove in the artificial timber article at least partially along one or more sides thereof; and
 - fitting a strip of reinforcing material into the groove or grooves, wherein the reinforcing material inserted is solid timber.
5. A method according to claim 4, wherein the groove is of a dimension to snugly fit the reinforcing material.
6. A method according to claim 4 or 5 further including the step of fastening the reinforcing material to the timber article, such as by wood adhesive.
7. A method of strengthening or modifying an artificial timber article for application of fixing means substantially as herein described with reference to the accompanying drawing.
8. A timber article made by the method of any one of claims 4 to 7.



9. An artificial timber article substantially as herein described with reference to the accompanying drawing.

DATED this 20th day of September 2002
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Fig 1.

